PATENT SPECIFICATION

296,884

Application Date: Aug. 19, 1927. No. 21,895/27.

Complete Left: May 18, 1928.

Complete Accepted: Sept. 13, 1928.

PROVISIONAL SPECIFICATION.

Improvements in and relating to Illuminating Appliances.

We, HOLOPHANE LIMITED, of Holophane House, Elverton Street, Vincent Square, London, S.W. 1, a company organised and existing under the laws of Great Britain and Ireland, and ROLLO GILLESPIE WILLIAMS, of 39, Southdown Road, Wimbledon, London, S.W. 19, of British nationality, do hereby declare the nature of this invention to be as follows:—

This invention relates to illuminating appliances and its object is to provide a novel effect useful for example for decorative purposes.

According to the invention the light is passed through two or more layers of prismatic or fluted glass which are moved relatively to one another. This produces a brilliant sparkling or wave effect according to the character of the glass and the nature of the movement. The invention is particularly valuable when used in conjunction with changing colour lighting.

The two layers of glass may have refracting or diffusing prisms or flutes on one or both sides. The relative motion may be rotary or in straight lines and a reciprocating motion may be used. To obtain the best effect quite a slow motion should be used.

In one preferred embodiment suitable for use in an appliance suspended from or forming part of a ceiling, a rotary motion is used. The visible part of the appliance is closed in and the light all passes through the circular bottom which is glazed with prismatic or fluted glass. At the top of the appliance are mounted light sources, reflectors and colour screens so that a changing coloured beam either composite or plain may be directed downwards. An electric or other motor is mounted above the light sources and drives, through reducing gear if necessary, a vertical shaft reaching down nearly to the fixed glazing. This shaft carries a suitable circular frame glazed with the second layer of prismatic or fluted glass.

Alternatively the frame carrying the upper layer of glass may be slidably carried and reciprocated for example by a crank and connecting rod, or cam mechanism, operated by the motor.

Preferably the whole construction is enclosed to protect it from dust, suitable hinged doors for access to the interior being provided. A wire netting screen may be provided below the fixed glazing for protection in case of breakage.

Dated this 19th day of August, 1927.
SEFTON-JONES, O'DELL & STEPHENS,
Chartered Patent Agents,
285, High Holborn, London, W.C. 1,
Agents for the Applicants.

COMPLETE SPECIFICATION.

Improvements in and relating to Illuminating Appliances.

We, HOLOPHANE LIMITED, of Holophane House, Elverton Street, Vincent Square, London, S.W. 1, a company organised and existing under the laws of Great Britain and Ireland, and ROLLO GILLESPIE WILLIAMS, formerly of 39, Southdown Road; Wimbledon, London, S.W. 19, but now of 60, Elgar Avenue, Surbiton, Surrey, of British nationality, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to appliances used for indoor illumination and its object is to provide a novel effect for decorative purposes.

According to the invention the light is passed through an appliance let into or secured to a ceiling, wall or like surface comprised of two or more layers of prismatic or fluted glass which are moved relatively to one another. This produces a brilliant sparkling or wave effect according to the character of the glass and the nature of the movement. The invention is particularly valuable when used in conjunction with changing colour lighting.

The two layers of glass may have

refracting or diffusing prisms or flutes on one or both sides. The relative motion may be rotary or in straight lines and a reciprocating motion may be used. To obtain the best effect quite a slow motion should be used.

Some arrangements embodying the invention are shown by way of example in the accompanying drawings, in which—

Figure 1 is a vertical section of an arrangement for use in a ceiling, employing rotary motion.

Figures 2 to 5 are plan views showing some possible arrangements of prismatic glass for use in the arrangement shown in Figure 1, and

Figures 6 and 7 are respectively a vertical section and plan of an alternative arrangement employing reciprocating motion.

Referring first to Figure 1, a circular frame 1 is let into a ceiling 2 and is glazed with prismatic or fluted glass 3, while below is provided a safety screen 4 of wire netting. Above the glass 3 is a second circular frame 5 also glazed with prismatic or fluted glass 6. The frame 5 is secured on the end of a shaft 7 adapted to be rotated at a slow speed for example by an electric motor 8 which may be of a slow speed type or may have a reducing gear which may be embodied with it as at 9. Suitable light sources and colour screens not shown in detail are mounted above the frames 1 and 5 in the space indicated by 10. Arrangements may also be provided for changing the colours while the apparatus is in action.

Various arrangements of the prismatic or fluted glass in the frames 1 and 5 are shown in Figures 2—5. In Figures 2, 3 and 4 the glass is fitted in sector shaped panes while in Figure 5 a series of similarly shaped panes with angular sides are used. In Figure 2 the prisms or flutes in all the panes are parallel with the mid radius of the pane. In Figure 3 the prisms or flutes in the lower panes (in frame 1) are alternately parallel with and perpendicular to the mid radii of the frames. In the upper frame 5 the prisms or flutes in each pane, which is twice the width of a lower pane, are perpendicular to the mid radius of the pane. In Figure 4 the prisms or flutes in all the lower panes are perpendicular to the mid radius of the pane, and in all the upper panes are parallel to the mid radius. In Figure 5 in both sets of panes the prisms or flutes are arranged in three different ways. In panes 11 the prisms or flutes are parallel with the side 12, in panes 13 they run across the pane and in panes 14 they are parallel with the side 15. It will be understood that the prisms or flutes may be on one or both sides of the glass and when used on both sides may have different directions. Any other arrangement of prisms or flutes may be used and some or all of the panes may be coloured, while more than two layers of glass may also be used.

In the alternative construction shown in Figures 6 and 7 a rectangular fixed lower frame 16 glazed with prismatic or fluted glass 17 is used, together with an upper frame 18 similarly glazed and slidable in guides 19. The frame 18 is reciprocated, conveniently by a crank disc 20 and connecting rod 21. The crank disc is shown as driven by an electric motor 22 through a worm gear, but any other drive may be used, while a cam or other suitable mechanism may be substituted for the crank and connecting rod. As before any convenient arrangement of prismatic or fluted glass may be used while a wire netting safety screen 23 is provided beneath the frame 16.

Whichever arrangement is adopted, it is preferably enclosed to protect it from dust, suitable hinged doors being provided for access to the interior. It will also be understood that though arrangements let into a ceiling have been illustrated, they may instead be used on walls or like surfaces.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. An appliance for indoor illumination in which the light is passed through an appliance let into or secured to a ceiling, wall or like surface comprised of two or more layers of prismatic or fluted glass which are moved relatively to one another.

2. An illuminating appliance according to Claim 1, in which a rotary relative motion is used.

3. An illuminating appliance according to Claim 1, in which a straight line motion which may be reciprocating is used.

4. An illuminating appliance according to any of the preceding claims, in which means for producing a changing coloured beam are provided.

5. An illuminating appliance according to any of the preceding claims in which a safety screen wire netting covers the outermost layer of glass.

6. An illuminating appliance according to any of the preceding claims in which the appliance is closed in to prevent the access of dust to the interior.

7. Illuminating appliances substantially as described with reference to the accompanying drawings.

Dated this 18th day of May, 1928.

SEFTON-JONES, O'DELL & STEPHENS,
Chartered Patent Agents,
285, High Holborn, London, W.C. 1,
Agents for the Applicants.

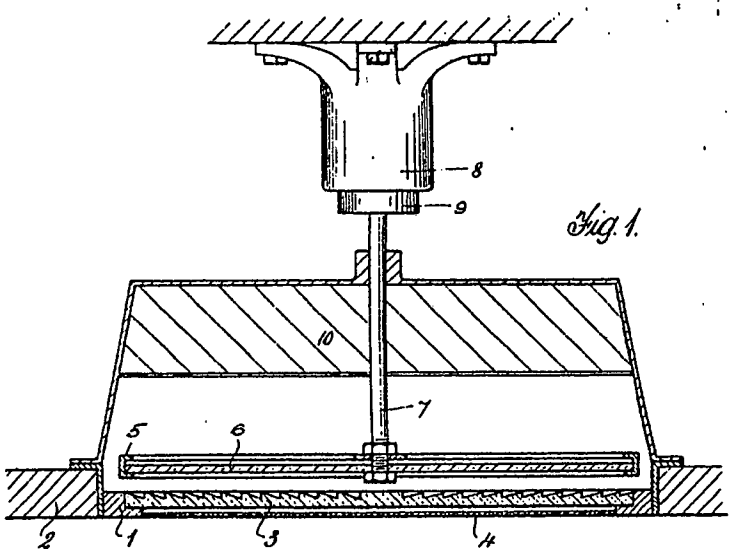

Fig. 1.

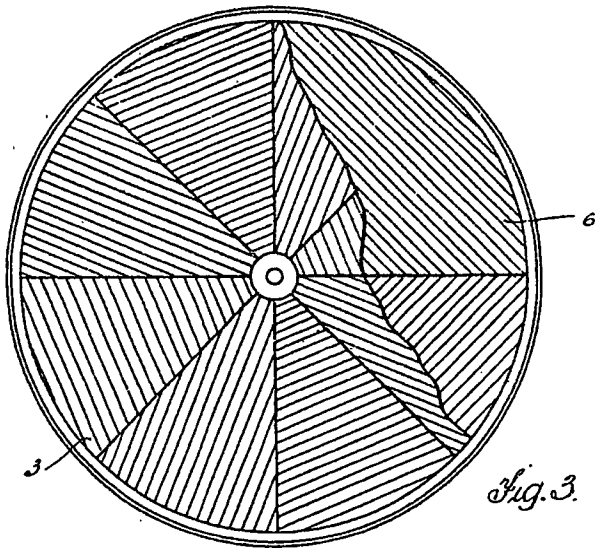

Fig. 3.

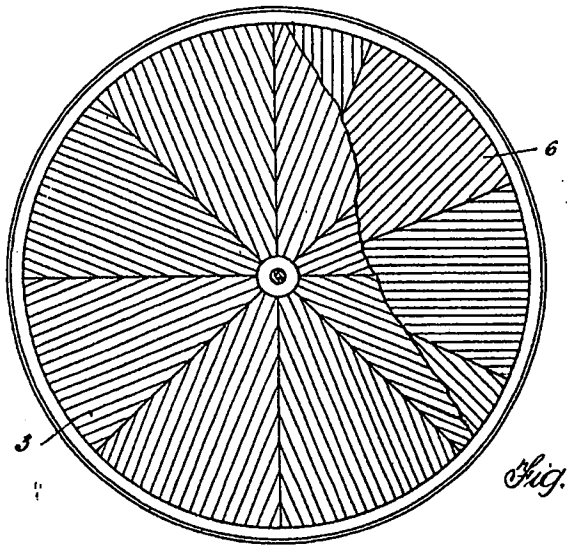

Fig. 2.

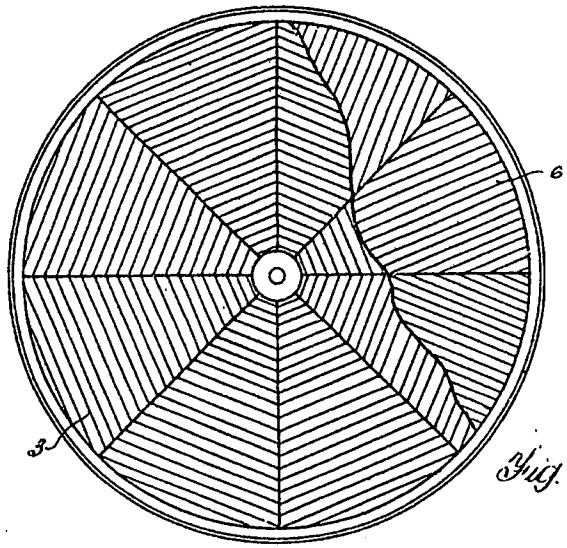

Fig. 4.

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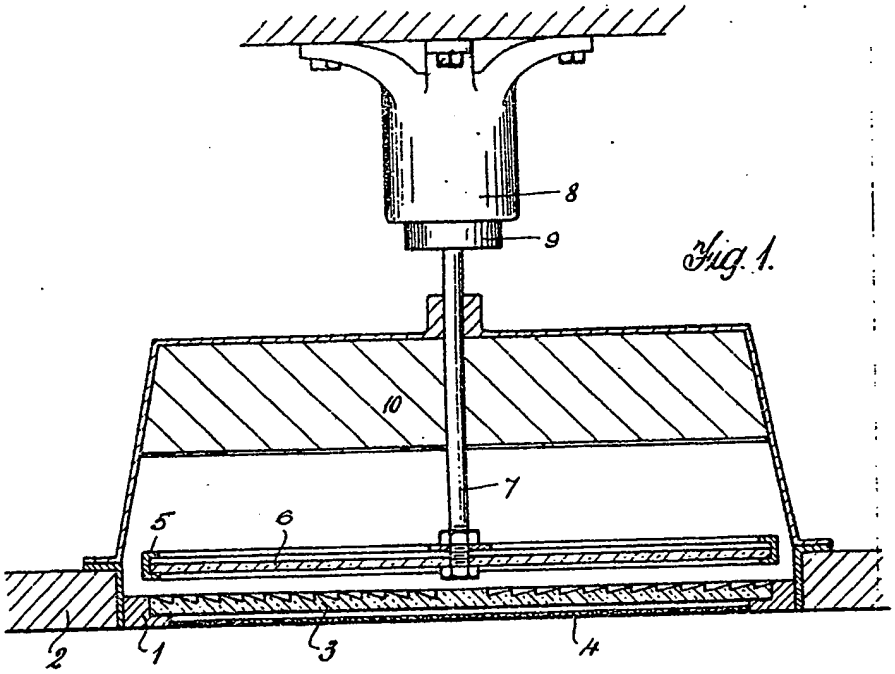


Fig. 1.

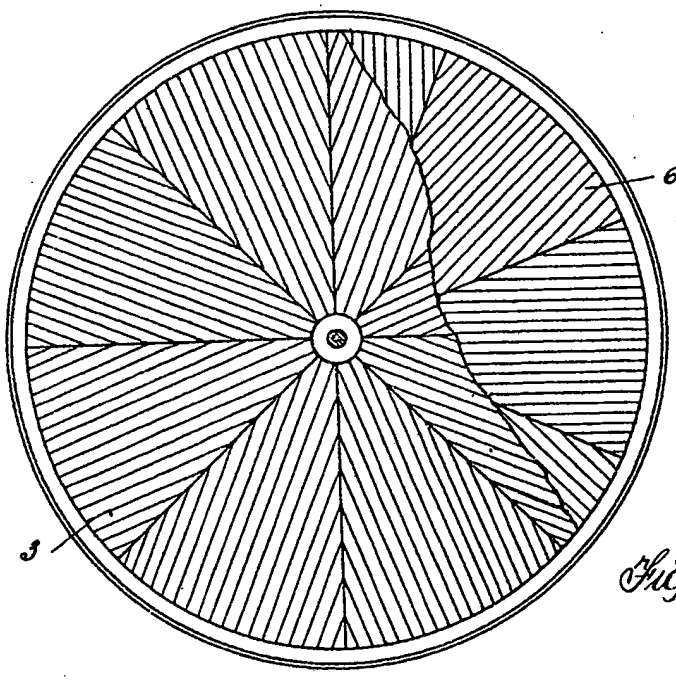
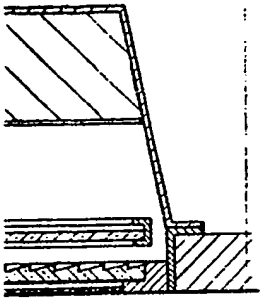


Fig. 2.

Fig. 1.



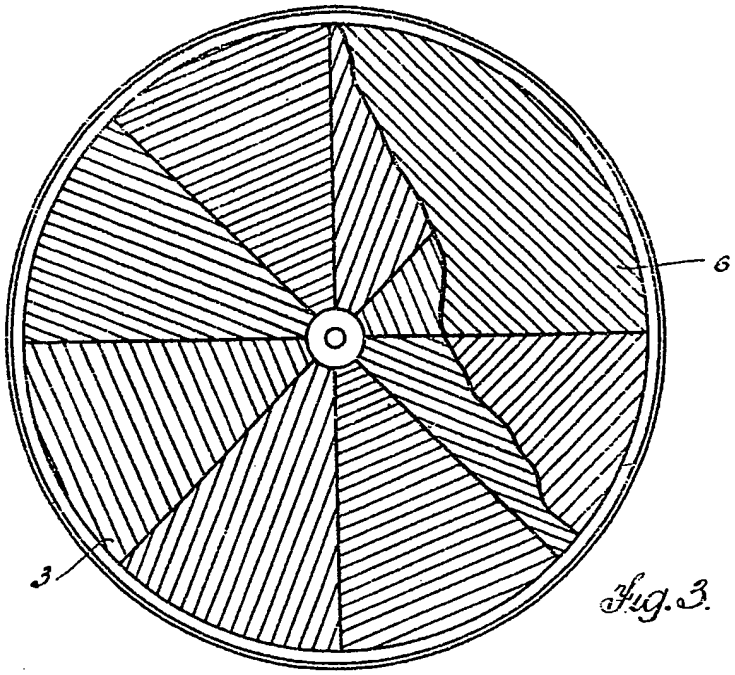


Fig. 3.

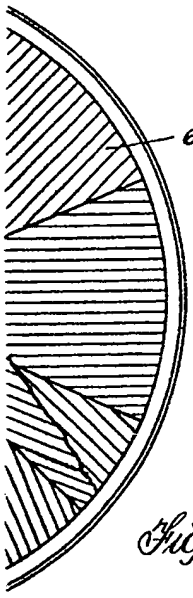


Fig. 2.

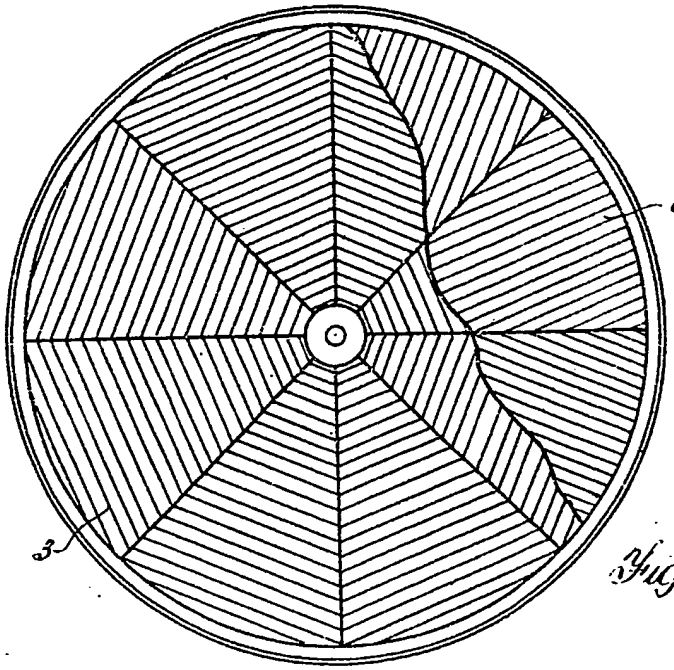


Fig. 4.

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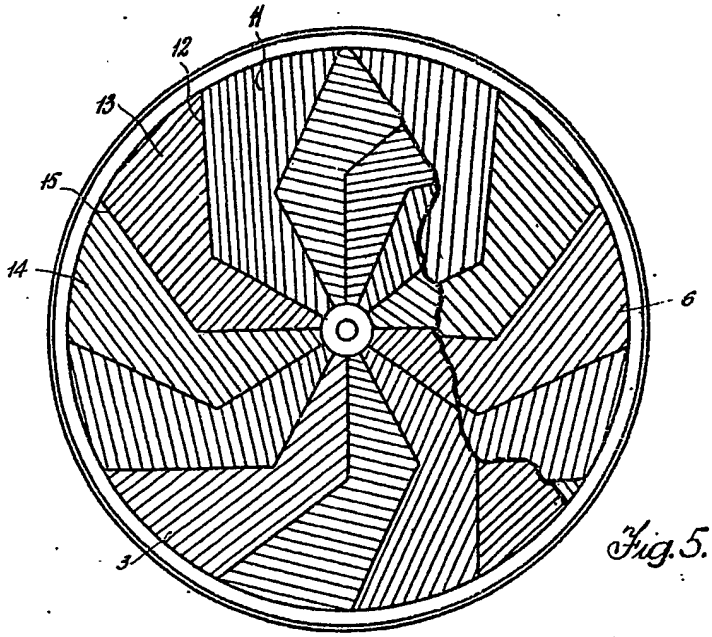


Fig. 5.

Fig. 7.

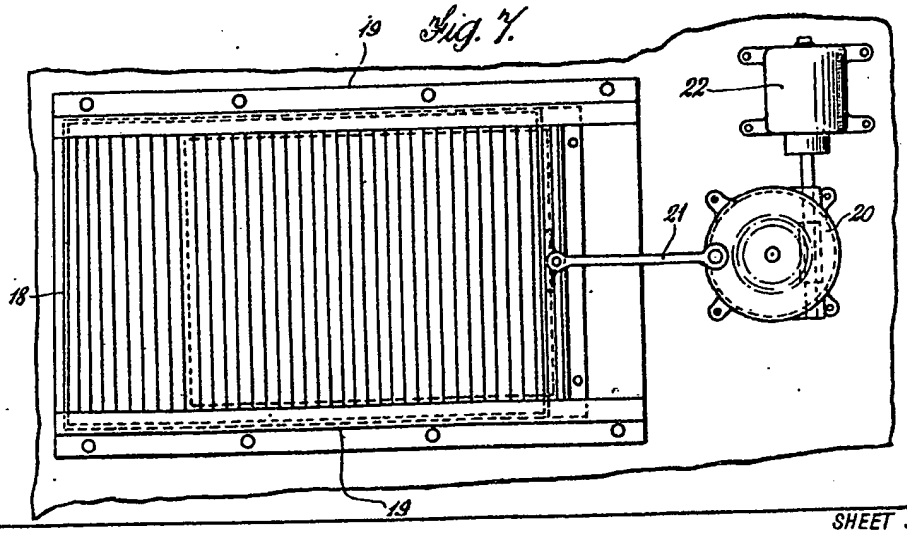
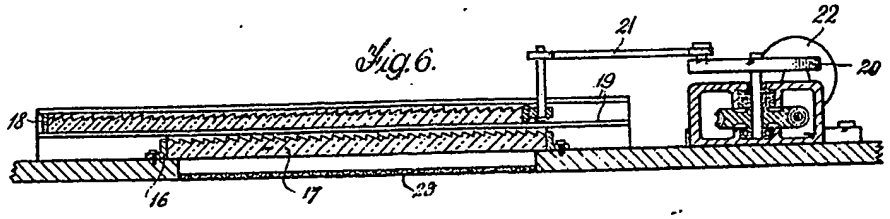


Fig. 6.



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